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Jan 1st, 12:00 AM

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Anna Lingling Perry
Iowa State University

Mary Lynn Damhorst
Iowa State University

Jennifer Paff Ogle
Colorado State University, jennifer.ogle@colostate.edu

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Lingling Perry, Anna; Damhorst, Mary Lynn; and Ogle, Jennifer Paff, "The relationship among weight controllability, weight-based stereotypes and attitudes, and weight loss behaviors" (2013). *International Textile and Apparel Association (ITAA) Annual Conference Proceedings*. 237.

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The relationship among weight controllability, weight-based stereotypes and attitudes, and weight loss behaviors

Anna Lingling Perry, Mary Lynn Damhorst, Iowa State University, USA
Jennifer Paff Ogle, Colorado State University, USA

Keywords: Weight control, anti-fat attitude, stereotypes, weight loss

Beliefs about personal control over body weight and attitudes about persons who are overweight may be related to one's own body esteem (Schwartz, Vartanian, Nosek, & Brownell, 2006). In addition, body esteem has been found to be related to adoption of weight loss behaviors in a variety of studies (e.g., Stice & Shaw, 1994). We explored multidimensional relationships among perception of weight controllability, negative stereotypes about obese persons, body esteem, and weight loss behaviors to examine connections among all variables. Five hypotheses were derived from previous research and informed by Bandura's discussion of self-efficacy connecting perceptions of control to behavior (1982): H₁: Beliefs about weight control are positively related to body esteem; H₂: Beliefs about weight control are positively related to obesity stereotypes; H₃: Anti-fat attitude is positively related to obesity stereotypes; H₄: Body esteem is positively related to weight loss behaviors; And H₅: Obesity stereotypes are positively related to weight loss behaviors.

Method. The data were collected via survey through a convenience sample in two classes, as part of a longitudinal study examining student body attitude formation. Participants included 197 undergraduate students (175 women, 22 men) enrolled at universities in a U.S. Midwestern and a Western state. The mean age was 19.58 years; 96% were between 18-22 years old. Items were rated on 7-point scales and were adopted from previous studies (e.g., Crandall, 1994, Mendelson, Mendelson, & White, 2001). Principle component factor analysis with Promax rotation was used for data reduction.

Seven factors were generated: beliefs about weight control ($\alpha = .839$), obesity stereotype 1: incompetent ($\alpha = .825$), obesity stereotype 2: bad person ($\alpha = .893$), anti-fat attitude ($\alpha = .953$), body esteem (self-evaluations of body and appearance) ($\alpha = .912$), weight loss by dieting ($\alpha = .944$), and weight loss by extreme method (drugs or vomiting) ($\alpha = .868$). Because some of the original factors were loaded into two factors, sub-hypotheses were created (See Figure 1). SEM with Mplus was used to examine the relationships between the latent variables.

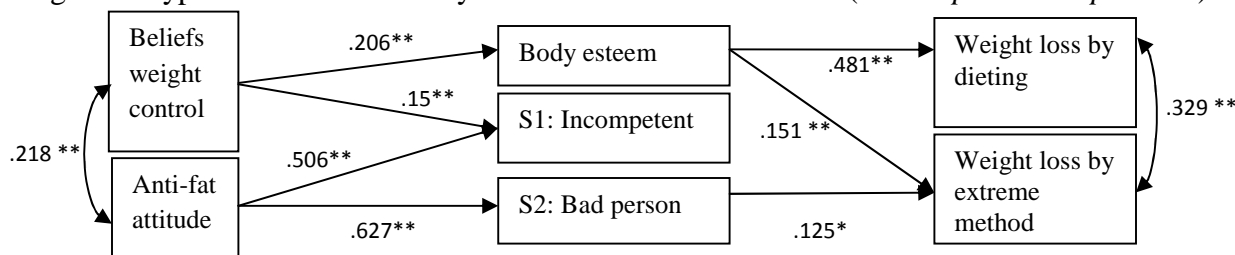
Results and Discussion. The fitness indices of the original model indicated a moderately good fit ($\chi^2(9) = 54.29$, CFI=.89, RMSEA=.113, SRMR=.049). To obtain a better fitting model, we removed insignificant paths. Fitness indices indicated a good fit for the modified model ($\chi^2(2)$

(178) = 369.24, CFI = .97, RMSEA = 0.053, SRMR = 0.063). Furthermore, most hypotheses became significant (see Figure 1).

The relationship between people's beliefs about weight controllability and weight loss behaviors was mediated by body esteem. People who held higher beliefs that body weight can be controlled and had higher body esteem were more likely to try to lose weight by dieting than by extreme methods, but may try more extreme methods (weaker path). In contrast, negative attitudes about fatness (anti-fat) directly lead to stereotypes about obesity, but only the stereotype that obese persons had bad personal qualities (e.g., greedy, untrustworthy) mediated weight loss by extreme methods. In other words, holding anti-fat and bad person attitudes/stereotypes led to a likelihood (weak) that extreme weight loss methods (e.g., laxatives, vomiting) might be adopted. Holding the stereotype that obese persons are incompetent had no relationship to weight loss behaviors. Body esteem was not related to obesity stereotypes.

The findings indicate complex relationships among variables. Education programs to reduce negative attitudes about obesity and to dispel myths about the possibility that all persons can control body weight (see Crandall, 1994) may help to decrease negative stereotypes about obese persons and may help to reduce dangerous weight loss behaviors.

Figure 1 Hypotheses test results by SEM of the modified model (Note: * $p = .05$. ** $p = .001$)



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